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A STUDY TO DEVELOP A METHODOLOGY FOR EVALUATING
THE EFFECTIVENESS OF A RISK MANAGEMENT PROGRAM
AT U.S. ARMY MEDICAL TREATMENT FACILITIES

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A Graduate Research Project
Submitted to the Faculty of
Baylor University
In Partial Fulfillment of the
Requirements for the Degree
of
Master of Health Administration

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by

Lieutenant Colonel Gerald E. Thompson, MSC

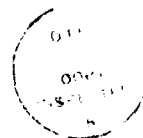
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Every hospital should have a plaque in the physicians' and students' entrances: "There are some patients whom we cannot help; there are none whom we cannot harm."

--Arthur L. Bloomfield,
cited by Andrew Korsak,
"Risk Management," Hospitals 52 (16 November
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CHAPTER I

INTRODUCTION

Historical Perspective

Just as the practice of medicine can be traced to the beginning of civilization, so, too, can the practice of holding the provider accountable for the quality of the care rendered. Over 1,600 years before the Oath of Hippocrates (400 B.C.) was written, the Code of Hammurabi stipulated that the physician should be held accountable for his actions. In what is probably the first written discussion of malpractice and compensation for malpractice, the Code of Hammurabi states, in part:

If the surgeon has made a deep incision in the body of a free man and has caused the man's death or has opened the caruncle in the eye and so destroys the man's eye, they shall cut off his forehead.¹

History does not record the impact this provision had upon the practice of medicine, nor is it possible to discern how often, if at all, such severe "compensation" was extracted. However, it was from this starting point that the fundamental theory of physician liability and the concomitant accountability for iatrogenic patient injury evolved.

From Hammurabi until today, intervening societies throughout history have developed their own standards regulating the degree of physician accountability and the methods by which the injured patient might seek redress. In this evolutionary process, the limits on liability and accountability have been extended beyond the physician to

include those ancillary personnel who minister to patient needs and, possibly most importantly, to the institutions that provide the setting in which to render patient care.²

Unlike the concept of physician liability and accountability, which can be traced back to Hammurabi, the history of hospital liability and accountability for the care provided is contemporary. "Until recently, most hospitals were protected from corporate liability by the doctrine of charitable immunity. This doctrine, combined with the then pervasive notion that hospitals were just four walls within which physicians treated their patients, gave hospitals almost complete protection from the possibility of corporate liability."³

As hospitals became more than just a "hotel" in which physicians could treat their patients, they gradually lost their corporate immunity. The courts have relied upon two theories in stripping hospitals of corporate immunity. The first theory is the doctrine of respondeat superior, which translates to "Let the master answer." In *Bing v. Thunig* (1957), the New York Court of Appeals ruled that charitable immunity is no longer applicable to hospitals and that hospitals should face liability under the doctrine of respondeat superior. Under this doctrine, hospitals are liable for the wrongs of their employees while they are performing within the limits of their responsibilities.⁴

The second theory causing hospitals to face corporate liability holds that, if a hospital violates a duty of care which as an entity it owes that patient, then it is liable for damages. Contrary to respondeat superior, which holds hospitals liable for the actions

of employees, the duty-of-care theory expands hospitals' boundaries of liability to include the malpractice of staff physicians--who are not employees of the hospital. The landmark case dealing with duty of care was *Darling v. Charleston Community Memorial Hospital* (1965).⁵ In the *Darling* case, the Supreme Court of Illinois found the hospital liable for the negligence of an independent staff physician and thus expanded hospitals' duty of care to include the following:

1. The hospital must not allow an independent staff physician to violate a specific hospital requirement for patient safety.
2. The hospital must ensure that its employees will detect apparent dangers to the patient and bring such dangers to the attention of the hospital medical or surgical staff and the administration so that the administration can act to alleviate the danger.
3. The hospital has a duty to supervise the actions of independent staff physicians.⁶

As a result of the theories of respondeat superior and duty of care, the concept of risk management evolved as hospitals looked for methods which could be used to protect themselves from liability.

Concept of Risk Management

Brown, in his text Risk Management for Hospitals, points out that, on the surface, the words risk and management are considered by some to be somewhat paradoxical when combined to describe a program. Risk is negative and connotes a need for avoidance, while management is considered an active effort to obtain positive results. Brown goes on to say that "a program that provides positive avoidance of negative results is not paradoxical. It is instead part of a good overall management program."⁷ That is, indeed, the charter of a good risk management program--positive avoidance of negative results.

The process of risk management involves detecting, evaluating, financing, and reducing risk of financial loss.⁸ O'Connell says the purposes of a basic risk management program are threefold:

1. To avoid the causes of loss.
 2. To lessen the operational and the financial effects created by losses which are unavoidable.
 3. To provide for inevitable losses at the lowest practical cost.
- These purposes are accomplished through the process of risk identification, risk control, and risk financing.⁹

Risk Management in Army Hospitals

Unlike their civilian counterparts, physicians and all other employees of military hospitals are protected from personal liability for incidents of medical malpractice by the Gonzales Act.¹⁰ The Army hospital as a "corporate entity," however, is fully liable for the actions of all of its employees under the theory of respondeat superior. Additionally, the duty-of-care theory is fully applicable to Army hospitals. Like the civilian institution, the Army facility attempts to minimize financial losses through an effective risk management program.

Requirements and procedures for risk management programs in Army hospitals are outlined in Army Regulation 40-66. This regulation states that risk management is "a program concerned with accidents and injury prevention and the lowering of financial losses after an incident has occurred. It will identify problems or potential risk circumstances that must be eliminated or reduced to prevent accident

and injury."¹¹

The keystone of an effective risk management program is the identification of potential compensable events (PCEs). The identification of events/incidents which are potentially compensable before the patient seeks legal redress gives the liable party an opportunity to take actions to minimize financial loss. Further, the early identification of incidents of this nature allows steps to be taken immediately to avoid recurrence. The method which the Army utilizes to identify PCEs is the requirement for submission of a Report of Unusual Occurrence (Department of the Army Form 2106) whenever an incident occurs. The Army defines an incident as "any accident or event not consistent with normal patient care that either did, or could result in an injury to a patient."¹²

A very specific review process of all incident reports and the active involvement of the Medical Claims Judge Advocate are required by regulation. Again, the purpose of this process is the early identification of those incidents which are potentially compensable.

Conditions Prompting the Study

This study was undertaken at the suggestion of the Executive Officer, Tripler Army Medical Center (TAMC), Honolulu, Hawaii. The Executive Officer is concerned as to the overall effectiveness of TAMC's Risk Management Program and, specifically, the program's effectiveness in identifying potential compensable events. The basis for his concern was a preliminary analysis of risk management performance data for 1982 which revealed that, of the 258 unusual occurrence/

incident reports submitted during the year, only two identified incidents that eventually resulted in claims against the government. Those two claims totaled less than \$3.5 million. However, during the same period, a total of twenty-seven claims for compensation totaling over \$83 million were filed. Why weren't the other twenty-five potentially compensable events identified through the incident-reporting system? Is the TAMC system in full compliance with established regulatory requirements?

A review of the TAMC Risk Management Program revealed that the basic requirements of Army Regulation 40-66 are being met; however, no obvious reason was found to account for the fact that 92 percent of the PCEs in 1982 were not identified via the incident-reporting system. A more exhaustive study of the risk management program is required.

Statement of the Problem

The problem is to develop a methodology for evaluating the effectiveness of a risk management program at U.S. Army medical treatment facilities (medical centers and community hospitals).

Objectives

This research study is meant to be a comprehensive analysis of the current TAMC Risk Management Program. Therefore, the objectives of this investigation are to:

1. Conduct a comprehensive review of the literature to enhance the researcher's fund of knowledge and to provide a basis for conducting the study.

2. To examine incident reports for the last three years to determine trends, frequency of events, high risk areas, and relationship of the charting of reporting elements to trends and high risk areas.
3. To compare (a) reported incidents and patient injury claims for the last three years and (b) actual claims for that period to determine their relationship and the money amounts involved.
4. To analyze and evaluate the established risk management procedures to determine negative and positive aspects of the existing program.
5. To compare the existing risk management program with alternative systems to ascertain the program's efficacy.
6. To perceive and formulate those improvements needed to enhance the effectiveness of the present risk management program.
7. To make recommendations for the implementation of an improved risk management methodology at TAMC and, possibly, Armywide.

Criteria

The criteria for this study are:

1. Ideally, an effective risk management program should identify 100 percent of potentially compensable events; however, pragmatically, this is a goal which is constantly sought but rarely obtained. The literature shows that to identify 75 percent of the claims through incident reporting is an admirable objective.¹³ Therefore, the TAMC program will be evaluated on the basis of the 75 percent correlation between claims and incident reports.
2. To be effective, an incident-reporting system must involve the

reporting of incidents from the medical staff, the nursing staff, and the administrative staff.¹⁴ For example, if the vast majority of the claims are physician-related incidents and the majority of incident reports are submitted by the nursing staff and do not identify the incidents which result in claims, then the incident-reporting system is not effective.

3. The research should provide a historical data base representative of the types of incidents which have occurred and the sources of incidents that resulted in claims.
4. The recommendations for improvement must provide the medical treatment facility commander with a method by which he can identify risk management trends and problem areas. As a result of reviewing these data, the commander would then be able to allocate the appropriate resources (personnel and/or fiscal) or take other action, such as education of personnel, to resolve problems and to minimize recurrence of incidents and, concomitantly, reduce monetary claims against the government.

Assumptions

For the purposes of this study, the following assumptions were made:

1. The Army Medical Department is not contemplating taking any direct or indirect action to change the current risk management program requirements.
2. Since this study will involve analyzing claims information controlled by an agency external to TAMC, cooperation and acceptance

of this research effort is assumed.

3. Other Army hospitals are experiencing problems similar to those of TAMC, and the information generated from this limited research effort will be of value to other Army hospitals.

Limitations

This study was limited by the following factors:

1. The research effort was constrained by the finite knowledge of the researcher and the limited resource material in the TAMC Medical Library and other libraries on the island of Oahu, Hawaii.
2. To fully evaluate the effectiveness of risk management programs Armywide would require indepth analysis of data for all Army hospitals, an effort which would be beyond the scope of a Master's level research project. Therefore, this research effort was limited to Tripler Army Medical Center.
3. The analysis of incident reports and claims data was limited to three years because earlier information is incomplete.
4. Statistical analysis was confined to descriptive statistics. The analysis accomplished, however, provided the information necessary to support objectives 2 and 3. Furthermore, any statistical techniques that exceeded descriptive statistics would have been of little value from the standpoint of transferability to other hospitals because of the sophistication required in their application.

Definitions

For the purposes of this study, it is pertinent to define the following terms:

Risk management is "the science for the identification, evaluation, and treatment of the risk of financial loss."¹⁵

Incident is "any occurrence, accident or event that is not consistent with normal patient care that either did or could directly result in an injury to a patient, employee, or visitor."¹⁶ The term is broadly interpreted to identify any deviation from commonly anticipated medical outcomes.¹⁷

Research Methodology

The objectives of the study were carried out in a four-phase methodology. Phase One, the Preliminary Phase, involved an extensive literature review. This was partially accomplished in the preparation of this graduate research study; however, due to the plethora of information on the subject, the literature review entailed an ongoing process throughout the research effort.

Phase Two, the Quantitative Phase, comprised a comprehensive analysis of incident reports and claims data over a three-year period. This phase resulted in the identification of trends, frequency of incidents, high risk areas, and a charting of reporting elements in relation to trends and high risk areas. A comparison was made between reported incidents and actual claims. Frequency tables, bar graphs, rates, and trend lines are used to display data.

The Procedural Analysis Phase, Phase Three, entailed analyzing

established risk management procedures based upon the data collected and analyzed in Phase Two to determine positive and negative aspects of existing procedures. This phase also involved a comparison of the existing system with alternative systems supported by current literature.

Phase Four, the Recommendation Phase, focused upon making specific recommendations for action based upon the outcome of the previous phases.

Footnotes

¹Charles Kramer, Medical Malpractice, 4th ed. (New York: Practicing Law Institute, 1976), p.16.

²James E. Orlikoff, William R. Fifer, and Hugh P. Greeley, Malpractice Prevention and Liability Control for Hospitals (Chicago: American Hospital Association, 1981), p. 1.

³Ibid., p. 2.

⁴Bing v. Thunig, 2 N.Y. 2d 656, 143 N.E. 2d 3, 163 N.Y.S. (1957).

⁵Darling v. Charleston Memorial Hospital, 33 Ill. 2d 326, 211 N.E. 2d 253 (1965).

⁶Orlikoff, et al., p. 9.

⁷Bernard L. Brown, Risk Management for Hospitals (Germantown, Md.: Aspen Systems Corporation, 1977), p. 1.

⁸John L. Ashby, Sharmon K. Stephens, and Stephanie B. Pearson, "Elements in Successful Risk Reduction Programs," Hospital Progress 58 (July 1977): 60.

⁹John A. O'Connell, "Risk Management for Hospitals," Hospital Progress 55 (November 1974): 40.

¹⁰Gonzales Act, U.S. Code, Annotated, vol. 1, sec. 1089 (1979).

¹¹U.S., Department of the Army, Medical Record and Quality Assurance Administration, Army Regulation 40-66, with Changes 1 and 2 (Washington, D.C.: Department of the Army, June 15, 1980), p. 9-5.

¹²Ibid., p. 9-6.

¹³Maria R. Traska, "Program Spots Risk Areas and Trends," Modern Healthcare 8 (December 1978): 48.

¹⁴Charles W. Boone, "Well Planned Program Credited with Drop in Malpractice Claims," Hospitals 56 (1 April 1982): 37.

¹⁵Todd Dankmyer and James Groves, "Taking Steps for Safety's Sake," Hospitals 51 (16 May 1977): 60.

¹⁶Orlikoff, et al., p. 36.

¹⁷Robert H. Brook and Kathleen N. Williams, "Malpractice and the Quality of Care," Annals of Internal Medicine 88 (June 1978): 837.

CHAPTER II

DISCUSSION

General Information

Data indicate that, nationally, claims against hospitals increased by approximately 20 percent annually from 1970 to 1976. In 1974, one of every ten physicians insured by the St. Paul Company was sued for professional negligence. The National Association of Insurance Commissioners (NAIC) reported 14,074 settled claims against physicians between July 1, 1975, and June 30, 1976. Data also indicate that the number of claims filed against physicians and hospitals continues to increase annually. Even though the number of documented claims seems to be excessive, evidence exists that verifies the fact that a large number of potential claims are not filed. In 1974, the California Medical Insurance Feasibility Study showed that only one in six malpractice incidents results in a claim.¹

In an effort to counter the staggering number of claims, systems for detecting and evaluating events that affect patients have proliferated rapidly. The traditional concern which the medical profession has had for its patients has been augmented by interest, guidance, and massive funding from state and federal governments, licensing bodies, and other sources. "Systems developed in response to this increased interest in evaluating the quality of care have become so numerous that physicians and hospitals have sometimes expressed dismay at their number and cost and at the personnel, administrative activity,

and space they require."²

Systems currently used to evaluate quality of care and to minimize financial loss vary widely in philosophy, sophistication, efficiency, and effectiveness. Like most other hospitals and hospital systems, the Army Medical Department has developed a process for evaluating the quality of care provided its patients and for minimizing financial loss resulting from substandard care and other incidents. Also like other systems, the effectiveness of the Army's procedure has been questioned, and, at the present time, no method exists to validate the program. Methods have been developed in this research project, however, which will demonstrate the effectiveness or ineffectiveness of the Army Medical Department's risk management program at one of its largest medical centers.

Methods of Collecting Data

Since the hub of the Army's risk management program is the Report of Unusual Occurrence (DA Form 2106), more commonly known as the "incident report," it was decided early that an indepth analysis of these reports was indicated. Therefore, 787 incident reports spanning the period 1980-1982 were reviewed. Essential elements of information were extracted from each report for further analysis. The information obtained included the patient's name, the nature of the incident, the date and time of the incident, the location within the hospital where the incident occurred, the position (nurse, physician, etc.) of the person submitting the report, and the analyst who made a determination as to whether or not the incident was a potentially

compensable event. This last determination was necessary because, prior to March, 1982, Tripler Army Medical Center did not have a risk manager; therefore, prior to that time, PCEs were not being specifically identified.

Additionally, for those incidents involving medication errors, the name of the person making the error was recorded and the exact nature of the error, e.g., substituting phenobarbital for codeine, was identified. For medical treatment errors, the type of error made was recorded and, if available, the person making the error was identified. If the incident report dealt with equipment failure, then the type of equipment involved and the nature of the failure were noted. The data which have been collected in support of this research project provide the Commander, TAMC, with a comprehensive empirical data base representative of the types of incidents which have occurred.

The final set of data required for completion of the research project involved information relative to actual claims which had been filed against TAMC for the period 1980-1982. Initially, it was anticipated that this information could be easily acquired from the TAMC Judge Advocate and/or the Medical Claims Officer, U.S. Army Western Command (WESTCOM), Fort Shafter, Hawaii; however, as efforts to obtain the necessary data began, it was discovered that neither of these officers is required to maintain files or to capture historical data once disposition of a case has been made. The WESTCOM Medical Claims Officer did have comprehensive information available on those claims which had been filed during Calendar Year 1982. Without comparable data for the years 1980 and 1981, however, the value of this research

project would be less significant. Two other sources of medical claims information were identified. These two sources--(1) the Army Claims Service, Fort Meade, Maryland, and (2) the Legal Medicine Division, Armed Forces Institute of Pathology, Washington, D.C.--were able to provide the mission information.

Once all of the claims submitted for the years 1980-1982 had been identified, the data pertinent to this project were extracted. Each claim was analyzed to determine the nature of the claim, the element within the hospital against whom/which the allegation was made, and the dollar amount being requested by the claimant.

It should be noted at this point that all dollar values discussed will be the amounts requested by claimants and not the amounts actually paid. This is necessary because the majority of the claims have not been resolved and many will be in litigation for a number of years. Many of the claims will be denied for lack of substance, and, even when judgments are awarded, they are likely to be for much less than the amount requested. However, to identify amounts requested serves to point out the magnitude of the problem.

Incident Report Analysis

The total effort of the Army's risk management program is based upon the Report of Unusual Occurrence, or the incident report. Army Regulation 40-66 requires the prompt submission of an accident report for "any accident or event not consistent with normal patient care that either did, or could (have) result(ed) in an injury to a

patient."³ This section will analyze three years of incident reports and their contribution to the Army risk management program's stated purpose of "accident and injury prevention and the lowering of financial losses after an incident has occurred."⁴

The review of incident reports revealed that the 787 incidents could be grouped into five distinct categories by type: (1) falls, (2) medication errors, (3) medical treatment errors, (4) self-inflicted injuries, and (5) equipment failures. The "falls" group includes falling out of bed, falling while ambulating with crutches, falling out of wheelchairs, fainting (and falling), and falls related to safety defects (only four over a three-year period). The medication error category was composed of administration of the wrong dosage, administration to the wrong patient, administration of the wrong medication, omission of a dose, and infusion of intravenous medication at a rate slower or faster than prescribed. Medical treatment errors cover the entire spectrum of treatment, from the administration of the wrong type of whole blood to leaving a clamp in the abdomen after a surgical procedure. Self-inflicted injuries were predominantly attempted suicides and suicidal gestures. The equipment failure category involves any type of equipment failure; however, the majority reported concerned the malfunctioning of automatic intravenous fluid infusion pumps.

Table 1 shows the frequency of incidents ranked by category. Clearly, falls were the most frequently reported (60.6 percent) incident. No clear causative agent for the high number of falls could be discerned. The typical incident report read: "Noise heard in patient's room and upon investigation patient was found on floor"

TABLE 1
NUMBER AND FREQUENCY OF INCIDENT REPORTS BY CATEGORY OF INCIDENTS, 1980-1982

Category of Incident	Year						Cumulative	
	1980		1981		1982			
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total
Falls	188	66.9	141	56.9	148	57.4	477	60.6
Medication Errors	67	23.9	78	31.5	72	27.9	217	27.6
Medical Treatment Errors	11	3.9	4	1.6	22	8.5	37	4.7
Self-Inflicted Injuries	11	3.9	14	5.6	8	3.1	33	4.2
Equipment Failures	4	1.4	11	4.4	8	3.1	23	2.9
TOTAL	281	100.0	248	100.0	258	100.0	787	100.0

or "Found patient on floor of bathroom and patient stated, 'I felt dizzy and fell.'" In almost all instances, side rails on beds were reported to have been in the up position or the patient's condition had permitted him/her to be out of bed. Though beyond the scope of this project, there are many possibilities worthy of investigation that might reveal a causal relationship with falls; for example, the relationship between the medication the patient is taking and the frequency of falls or between the length of hospital stay and falls.

The overwhelming majority (94.4 percent) of falls occurred on patient wards and did not involve a safety fault. Table 2 indicates where within the hospital each of the 477 falls occurred. The Department of Medicine wards (16, 18, and 21) appear to be the high risk areas since these three wards accounted for 37.5 percent of the falls within the hospital. Of particular interest is that, over a three-year period, Ward 21 had about 8 percent more falls than Ward 16. These two wards are virtually identical in the type of patient treated. Also of interest is that five falls occurred on Ward 40, which is a surgical intensive care unit whose patients should be under almost constant supervision. These falls should clearly be investigated as PCEs.

Appendix A provides a more detailed listing of falls by month and area for each of the three years investigated. This will provide Tripler Army Medical Center an excellent data base for comparing future incidence of falls or for conducting more indepth studies.

The second most frequently reported incident (refer to Table 1) was medication error. Table 3 identifies the areas in which the

TABLE 2
NUMBER AND FREQUENCY OF FALLS BY AREA, 1980-1982

Area	Year						Cumulative				
	1980			1981				1982			
	Number	Percent of Total		Number	Percent of Total			Number	Percent of Total		
Ward 16	18	9.6		22	15.7		11	7.4		51	10.7
Ward 18	14	7.5		13	9.3		15	10.1		42	8.8
Ward 21	24	12.9		21	14.9		41	27.7		86	18.0
Ward 23 (CCU)	4	2.1		1	0.7		0	0.0		5	1.1
Ward 23 (ICU)	1	0.5		1	0.7		1	0.7		3	0.6
Ward 23 (PCU)	12	6.4		3	2.1		3	2.0		18	3.8
Ward 24	4	2.1		3	2.1		2	1.4		9	1.9
Ward 25	10	5.3		6	4.3		7	4.7		23	4.8
Ward 27	10	5.3		2	1.4		6	4.1		18	3.8
Ward 32	17	9.1		5	3.5		4	2.7		26	5.5
Ward 33	4	2.1		7	5.0		5	3.4		16	3.4
Ward 34	3	1.6		1	0.7		7	4.7		11	2.3
Ward 40 (SICU)	2	1.0		3	2.1		0	0.0		5	1.1
Ward 42	11	5.9		15	10.6		16	10.7		42	8.8
Ward 43	12	6.4		9	6.4		6	4.1		27	5.6
Ward 44	8	4.4		2	1.4		2	1.4		12	2.5
Ward 51	7	3.7		1	0.7		2	1.4		10	2.1
Ward 52	4	2.1		8	5.7		3	2.0		15	3.1
Ward 70	3	1.6		1	0.7		5	3.4		9	1.9
Ward 72	2	1.0		1	0.7		3	2.0		6	1.3
Ward 81	0	0.0		3	2.1		1	0.7		4	0.8
Ward 82	7	3.7		2	1.4		3	2.0		12	2.5
Labor & Delivery	1	0.5		3	2.1		1	0.7		5	1.1
PT/OT	7	3.7		7	5.0		3	2.0		17	3.5
Common Areas	2	1.0		1	0.7		0	0.0		3	0.6
Emergency Room	1	0.5		0	0.0		1	0.7		2	0.4
TOTAL	188	100.0		141	100.0		148	100.0		477	100.0

TABLE 3
NUMBER AND FREQUENCY OF MEDICATION ERRORS BY AREA, 1980-1982

Area	Year						Cumulative	
	1980		1981		1982			
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total
Ward 16	2	3.0	1	1.3	3	4.2	6	2.8
Ward 18	6	8.9	9	11.5	9	12.5	24	11.1
Ward 21	3	4.5	5	6.4	18	25.0	26	12.1
Ward 23 (ICU)	4	5.9	3	3.8	0	0.0	7	3.2
Ward 23 (ICU)	2	3.0	3	3.8	3	4.2	8	3.6
Ward 23 (PCU)	3	4.5	11	14.1	1	1.4	15	6.9
Ward 24	10	14.9	4	5.1	5	6.9	19	8.8
Ward 25	3	4.5	0	0.0	0	0.0	3	1.4
Ward 27	0	0.0	1	1.3	0	0.0	1	0.5
Ward 32	1	1.5	2	2.6	2	2.8	5	2.3
Ward 33	0	0.0	1	1.3	0	0.0	1	0.5
Ward 34	3	4.5	3	3.8	1	1.4	7	3.2
Ward 40 (SICU)	6	8.9	1	1.3	3	4.2	9	4.1
Ward 42	2	3.0	6	7.7	5	6.9	13	6.0
Ward 43	0	0.0	1	1.3	0	0.0	1	0.5
Ward 44	1	1.5	0	0.0	1	1.4	2	1.0
Ward 51	2	3.0	1	1.3	0	0.0	3	1.4
Ward 52	0	0.0	0	0.0	3	4.2	3	1.4
Ward 70	1	1.5	2	2.6	0	0.0	3	1.4
Ward 72	3	4.5	0	0.0	2	2.8	5	2.3
Ward 81	4	5.9	4	5.1	8	11.1	16	7.4
Ward 82	0	0.0	0	0.0	1	1.4	1	0.5
Labor & Delivery	2	3.0	2	2.6	1	1.4	5	2.3
Pharmacy	5	1.5	6	7.7	5	6.9	16	7.4
Allergy Clinic	2	3.0	1	1.3	0	0.0	3	1.4
Special Care Nursery	0	0.0	9	11.5	1	1.4	10	4.6
Newborn Nursery	1	1.5	2	2.6	0	0.0	3	1.4
Family Practice Clinic	1	1.5	0	0.0	0	0.0	1	0.5
TOTAL	67	100.0	78	100.0	72	100.0	217	100.0

217 reported incidents of medication error occurred. Three wards appear to be high risk: wards (1) 18 and (2) 21 (both general medical wards) and (3) Ward 24 (pediatrics). Again, it is interesting to note the significant difference in medication errors on two identical wards (16 and 21). Though not conclusive, since Ward 21 also had the most falls, there is a strong indication that a problem exists which merits investigation. Appendix B provides a more detailed monthly listing of medication errors by area.

The medication errors were categorized by type of error and frequency at which each type occurred. Table 4 presents the five types of medication errors that occurred at Tripler Army Medical Center during the period 1980-1982. Of the 217 incidents of medication error,

TABLE 4
NUMBER OF MEDICATION ERRORS BY TYPE, 1980-1982

Type of Error	Year			Cumulative	
	1980	1981	1982	Number	Percent of Total
Administration of Wrong Drug	29	34	30	93	42.9
Administration of Wrong Dosage	15	15	11	41	18.9
Omission of Dose	7	12	13	32	14.7
IV Infused at Wrong Rate	7	11	12	30	13.8
Administration to Wrong Patient	9	6	6	21	9.7
TOTAL	67	78	72	217	100.0

the most commonly reported was administration of the wrong drug. Intravenous fluids infused at the wrong rate could have been placed in the category of wrong dosage, but, because of the number and the apparent increase in the trend, it was decided to identify this category separately. All medication errors are potentially serious, but, most importantly, they are preventable.

The third most frequently reported incident was that involving error in medical treatment. Table 5 denotes where each of the reported incidents occurred. There are no areas that stand out as being especially high risk, and the only trend of note is the dramatic increase in the number of incidents reported in 1982 as compared to the prior years. More detailed analysis of the type of treatment errors being reported was likewise unremarkable--although many were of a serious nature. The fact that only 4.7 percent of the incidents reported were medical treatment errors was very surprising. Compared to other national studies, this is extremely low, since errors in medical treatment result in the majority of malpractice claims.⁵ (These data are compared to the actual claims experienced at TAMC in a subsequent portion of this paper.) A more detailed collection of data on this category is presented in Appendix C.

The next most frequently reported (4.2 percent) incident was self-inflicted injury. With two exceptions, each of these incidents involved either a suicidal gesture or an attempt at suicide. In no case, however, did a patient expire. The two exceptions involved altercations between patients. In addition, 90.1 percent (twenty-seven

TABLE 5
NUMBER AND FREQUENCY OF MEDICAL TREATMENT ERRORS BY AREA, 1980-1982

Area	Year						Cumulative	
	1980		1981		1982			
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total		
Ward 16	1	9.1	0	0.0	0	0.0	1	2.7
Ward 18	0	0.0	0	0.0	1	4.5	1	2.7
Ward 21	0	0.0	0	0.0	2	9.2	2	5.4
Ward 23 (ICU)	1	9.1	2	5.0	0	0.0	3	8.1
Ward 23 (PCU)	0	0.0	0	0.0	1	4.5	1	2.7
Ward 24	0	0.0	0	0.0	3	13.7	3	8.1
Ward 32	0	0.0	0	0.0	2	9.2	2	5.4
Ward 33	0	0.0	0	0.0	1	4.5	1	2.7
Ward 40 (SICU)	2	18.2	0	0.0	1	4.5	3	8.1
Ward 42	0	0.0	0	0.0	1	4.5	1	2.7
Ward 51	0	0.0	0	0.0	1	4.5	1	2.7
Ward 52	0	0.0	0	0.0	3	13.7	3	8.1
Ward 82	1	9.1	0	0.0	0	0.0	1	2.7
Newborn Nursery	0	0.0	2	5.0	1	4.5	3	8.1
Special Care Nursery	3	27.2	0	0.0	0	0.0	3	8.1
Operating Room	2	18.2	0	0.0	1	4.5	3	8.1
Recovery Room	0	0.0	0	0.0	1	4.5	1	2.7
Hematology/Oncology	0	0.0	0	0.0	2	9.2	2	5.4
Pediatric Clinic	0	0.0	0	0.0	1	4.5	1	2.7
Dermatology Clinic	1	9.1	0	0.0	0	0.0	1	2.7
TOTAL	11	100.0	4	100.0	22	100.0	37	100.0

reports) of these incidents occurred on the two psychiatric wards. Further analysis failed to reveal any information of significance on this category of incident. For example, level of supervision was checked, but, in each case, the supervision appeared to be adequate for the category of patient involved. More comprehensive data are presented in Appendix D.

The final category of reported incident involved equipment failures. Table 6 identifies those areas in which the reported equipment failures occurred. As noted throughout the literature, the most common place in which equipment failures occur is the operating room. In this case, seven of the twenty-six incidents did occur in the operating room. Of the seven incidents, only the collapse of an operating table occurred twice. The other operating room incidents were single occurrences and of less serious nature. However, when all twenty-six incidents of equipment failure were analyzed, it was noted that ten were failure or malfunction of intravenous fluid infusion pumps. The trend is increasing, with two incidents reported in 1980, three in 1981, and five in 1982. The only other equipment failures of note were two occurrences in 1982 of oxygen-mixing machines malfunctioning. Additional data concerning equipment failures are attached as Appendix E.

The last set of data extracted from the incident reports was an identification of the staff element submitting the report. These data were collected to provide a basis for comparing actual claims experience, the thesis being that events resulting in potential claims should be reported by the perpetrator of the event since that person

TABLE 6
NUMBER AND FREQUENCY OF EQUIPMENT FAILURES BY AREA, 1980-1982

Area	Year						Cumulative	
	1980		1981		1982			
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total		
Ward 21	0	0.0	1	7.1	0	0.0	1	3.8
Ward 23 (ICU)	0	0.0	1	7.1	1	12.5	2	7.7
Ward 23 (PCU)	0	0.0	1	7.1	0	0.0	1	3.8
Ward 24	0	0.0	0	0.0	1	12.5	1	3.8
Ward 40 (SICU)	1	25.0	1	7.1	2	25.0	4	15.6
Ward 42	0	0.0	1	7.1	0	0.0	1	3.8
Ward 52	0	0.0	1	7.1	0	0.0	1	3.8
Physical Therapy	0	0.0	1	7.1	0	0.0	1	3.8
Special Care Nursery	1	25.0	3	21.5	1	12.5	5	19.4
Recovery Room	1	25.0	0	0.0	0	0.0	1	3.8
Operating Room	0	0.0	4	28.6	3	37.5	7	26.9
Hemodialysis	1	25.0	0	0.0	0	0.0	1	3.8
TOTAL	4	100.0	14	100.0	8	100.0	26	100.0

has the most correct information concerning the facts of the occurrence. Table 7 identifies the five staff elements submitting incident reports during the period being studied. The nursing staff, the occupational/physical therapy staff, and the pharmacy staff groupings included ancillary as well as professional personnel. The medical staff group included only physicians. (In a subsequent section, the data in Table 7 are compared to the staff elements' claims experience.)

Claims Analysis

This portion of the study involved analyzing the actual claims seeking monetary remuneration for alleged injury that occurred in Tripler Army Medical Center during the period 1980-1982. The intent was to determine trends, identify high risk areas, and quantify the monetary amounts involved. Seventy-one claims were reviewed: eighteen in 1980, twenty-six in 1981, and twenty-seven in 1982.

Figure 1 is a histogram reflecting the number of claims and the department the claimant alleges was responsible. Over the three-year period studied, the greatest number of claims (thirty) were for acts supposedly occurring in Obstetrics/Gynecology; Surgery was second with twenty-five claims and Medicine was third with eight claims. Sharp increases were noted in Obstetrics/Gynecology in 1981 and in Surgery in 1982. Also, there is an upward trend in Medicine. The total number of claims being submitted is gradually rising--from 18 in 1980 to 27 in 1981.

That the vast majority of the claims (77.5 percent) are against Obstetrics/Gynecology and Surgery is not surprising. A 1982 survey of

TABLE 7
STAFF ELEMENT SUBMITTING INCIDENT REPORTS BY NUMBER AND FREQUENCY, 1980-1982

Submitting Agency	Year						Cumulative			
	1980			1981			1982			
	Number	Percent of Total		Number	Percent of Total		Number	Percent of Total		
Nursing Staff	265	94.3		237	95.6		237	91.9	739	93.9
Medical Staff	7	2.5		2	0.8		14	5.4	23	2.9
Occupational/Physical Therapy Staff	7	2.5		8	3.2		3	1.2	18	2.3
Pharmacy Staff	1	0.35		1	0.4		4	1.5	6	0.8
Administrative Staff	1	0.35		0	0.0		0	0.0	1	0.1
TOTAL	281	100.0		248	100.0		258	100.0	787	100.0

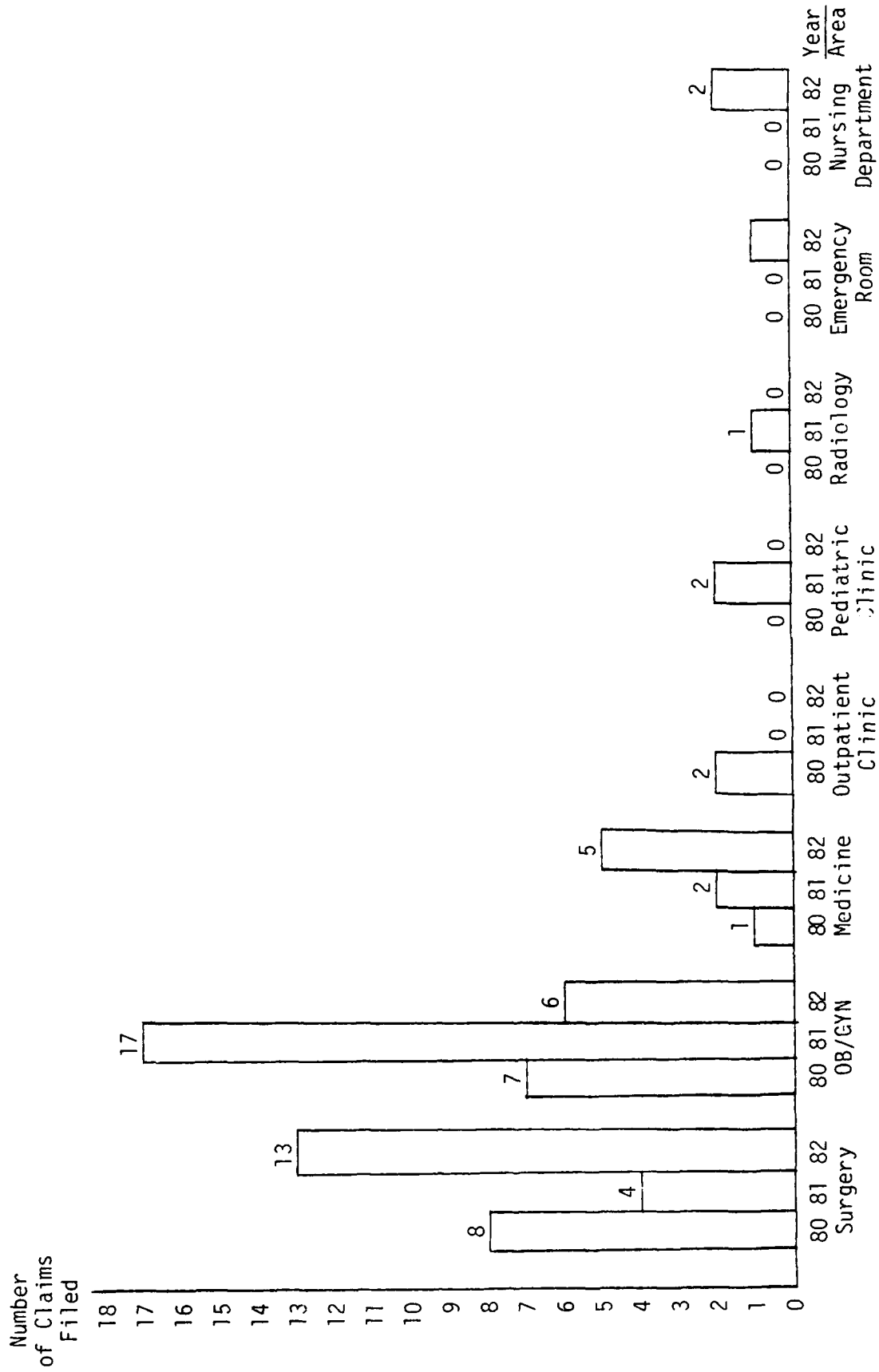


Fig. 1. Number of Medical Injury Claims by Department, 1980-1982

physicians by the American Medical Association showed that the most frequent liability claims are against, first, obstetrics/gynecology and, second, surgical specialties.⁶ These two areas are clearly high risk areas nationally as well as locally at TAMC.

The monetary value of the claims by department is reflected in Table 8. As would be expected, the largest dollar amounts are associated with Obstetrics/Gynecology and Surgery. This is also the national trend, as stated above.⁷ Discounting the one claim in 1980 for \$64 million, the dollar amounts are increasing significantly. In

TABLE 8
MONETARY VALUE OF CLAIMS BY DEPARTMENT,
1980-1982

Department	1980	1981	1982
Surgery	\$16.475	\$ 2.95	\$33.900 ^b
OB/GYN	70.650 ^a	34.70	29.947
Medicine	1.000	1.50	15.700
Outpatient	0.900	0.00	0.000
Pediatric	0.000	13.00	0.000
Radiology	0.000	0.50	0.000
Emergency Room	0.000	0.00	2.500
Nursing	0.000	0.00	1.500
TOTAL	\$89.025	\$52.65	\$83.547

^aOne claim was for \$64 million.

^bOne claim for \$19 million was for excessive anesthesia. Anesthesia Service is part of the Department of Surgery.

1980, the average amount claimed was \$1.47 million; in 1981, it had risen to \$2.025 million; and, in 1982, the average claim was for \$3.094 million.

Both the number of claims submitted and the dollar amounts involved are staggering; however, it is important to note that many claims are filed without sufficient substantiating evidence and that amounts requested in remuneration are generally significantly larger than those awarded. A study by the NAIC reported that 64 percent of the claims against 14,074 physicians from July 1, 1975, to June 30, 1976, resulted in no dollar award and that, of the remainder, only 5 percent resulted in awards of greater than \$100,000.⁸ Just because the majority of claims are denied and the average judgments are low does not mean, however, that a problem does not exist. For example, as recently as February, 1982, at another Army medical center, "a federal judge awarded more than \$12 million in damages--the largest amount ever given for government medical malpractice--to an ex-Army enlisted man and his wife whose child was born with severe defects at an Army hospital."⁹

Comparison of Incident Reports and Claims

One of the criterion established in this study for evaluating the effectiveness of the risk management program was that an effective program should have, as a minimum, a 75 percent correlation between incident reports and actual claims. A 75 percent correlation is considered reasonable since the literature cites a number of civilian hospitals that are obtaining at least a 75 percent correlation.¹⁰ Moreover, as previously mentioned, the objective of the Army's risk management program is the reduction of financial losses, with the incident report serving as the primary vehicle for accomplishing this objective.

Each of the seventy-one claims of liability submitted against Tripler Army Medical Center between 1980 and 1982 was checked against the 787 incident reports submitted during the same period. Only two of the seventy-one claims had been documented by an incident report, and these two incidents occurred in 1982. This translates to a 2.8 percent correlation for the three-year period or 7.4 percent for 1982. Regardless, the correlation is far from the effective level of 75 percent.

Research has shown that over 80 percent of claims submitted against hospitals involve physician negligence.¹¹ In the case of TAMC, the number is even higher. Of the seventy-one claims analyzed, only four (5.6 percent) did not involve physician negligence. When compared to incident report submissions, the percentages are reversed--less than 5 percent of the incident reports identified medical treatment errors. Moreover, when the data relative to the persons submitting incident reports (refer to Table 7) were analyzed, it was noted that less than 3 percent of incident reports were submitted by the medical staff. When these facts are compared to the criterion which states that an effective incident reporting system should involve incident reporting by the elements against whom/which claims are filed, then this system would have to be judged ineffective.

To compare the types of incidents reported to the types of claims filed is also noteworthy. The relationship between reported medical treatment errors and claims has already been discussed; however, it should be mentioned that none of the tabulated errors resulted in a claim. Only one claim involving a fall was filed as compared

to 477 incident reports of falls. The one fall had, however, been reported as an incident and had been identified as a PCE. The same is true for medication errors--one claim filed (reported as an incident) against 217 reported medication error incidents. There were no claims filed for self-inflicted injuries or because of equipment failure.

This is not meant to imply that all the other incident reports which did not result in claims were unimportant. A California study of more than 20,000 patient records from twenty-three hospitals showed that 1 of every 100 hospitalized persons could bring a successful claim against a hospital and/or a physician.¹² Therefore, many of the incidents reported could have possibly resulted in a claim. This discussion does demonstrate, though, that the current incident-reporting system is not effectively identifying the vast majority of the incidents for which claims for liability are being made.

Existing System--Pros and Cons

The most salient characteristic of the existing risk management program is its effectiveness in dealing with custodial liability (i.e., responsibility for the patient's safety while in the hospital) rather than with deficiencies in medical care. Though frequent adverse events due to custodial negligence are minor and lead to minimal dollar liability. Data collected by the NAIC indicate that over 90 percent of such claims are settled out of court and that, of those which go to trial, only 20 percent result in payment.¹³

If properly utilized, the data collected through incident

reporting could identify trends and problems worthy of investigation by TAMC's Quality Assurance Committee. Studies involving falls have already been suggested. Another example would be to solve the medication error problem of substituting phenobarbital for codeine and vice versa. This dilemma results from the two medications' similar characteristics of shape, size, and color and was identified as a problem by incident reports early in 1980. The difficulty continued to be noted in incident reports through 1981 and 1982.

The major weakness of the current procedure was identified in the comparison of incident reports and claims: The system does not identify liability claims. Why does this happen? First, there is no method of identifying incidents which are not reported, nor are there sanctions for failure to report incidents. Additionally, once an incident is reported, there are no standards for determining if it is potentially compensable. For example, the one claim filed in 1982 as a result of a medication error had been reported as an incident but had not been identified as a PCE.

Another problem is that the information is often not timely. Army Regulation 40-66 requires that an incident report be sent through the appropriate service and/or department chief to the risk manager. On many occasions, by the time the risk manager receives the report, the patient has already been discharged. If he/she were notified immediately and had the opportunity to explain the circumstances surrounding the incident, legal action might well be avoided.

Finally, the overall program is weakened by the absence of a full-time risk manager. Although Army Regulation 40-66 recommends

appointment of a risk manager, under the Army manpower allotment system, unless the hospital gives up a space in another area--which is not likely to happen--the risk management position must become an additional duty. A full-time risk manager enhances the effectiveness of the program by being able to investigate incidents; obtain statements from witnesses, if necessary; explain circumstances to patients; maintain data; develop trends; and direct problem-solving efforts. All of these functions can result in a reduction of financial losses.

Alternative Methods

The literature is replete with "better ways" of conducting risk management programs. The most frequently mentioned methods that appear to be the trend for the future are generic screening and the systems approach. In this context, the systems approach refers to programs that are comprehensive and do not rely upon a single source for risk management data. These two methods will be described and compared to the risk management techniques currently used by the Army Medical Department.

Generic screening is a process whereby criteria are listed that describe occurrences which could be useful in identifying and investigating adverse events and in evaluating the overall quality of care. The generic screening technique is institution-specific and, in fact, is optimally effective in detecting incidents and reducing liability only when generic outcome screening criteria are aimed at identified problem areas within that specific institution.¹⁴ A hospital can develop criteria by analyzing its empirical data pertaining

to liability claims. The following is a listing of the criteria a hospital might utilize for generic screening:

1. Unplanned removal or repair of an organ or a part.
2. Laceration or perforation of an organ during an invasive procedure.
3. Unplanned return to the operating room.
4. Length of stay greater than ninetieth percentile.
5. Transfer to another acute care facility.
6. Discharge or elopement against medical advice.
7. Neurologic deficit at discharge not present at admission.
8. Readmission to hospital.
9. Death.¹⁵

Screening criteria are particularly useful for developing profiles since the criteria are not specific to a particular diagnosis or procedure. When used in conjunction with incident reporting, generic screening is an effective technique for identifying the specific problem which should be addressed in future audits and medical care evaluation studies. Audits are typically used as performance evaluation tools designed to identify problems within the hospital, but use of audits in this fashion has definite shortcomings. As one author notes: "When we use audits to try to identify problems, it is like we are going fly hunting with an elephant gun. We are wasting our energy."¹⁶ Audits are most beneficial once a problem has been identified and it has been determined who is affected by the problem. Generic screening provides this information.

To ascertain the impact of the generic screening technique at Tripler Army Medical Center, the criteria previously identified

were applied to the actual liability claims experience for 1982. The comparison was limited to 1982 because that is the only year for which the preponderance of the required medical records was available. The results are reflected in Table 9.

TABLE 9
GENERIC SCREENING CRITERIA APPLIED TO LIABILITY CLAIMS FILED
AT TAMC IN 1982

Criterion	Number of Cases
Unplanned removal or repair of an organ or a part	1
Laceration or perforation of an organ during an invasive procedure	1
Unplanned return to the operating room	0
Length of stay greater than ninetieth percentile	0
Transfer to another acute care facility	2
Discharge or elopement against medical advice	1
Neurologic deficit at discharge not present at admission	2
Readmission to the hospital	6
Death	3
TOTAL	16

SOURCE: Criteria taken from: Lawrence Brenner and William F. Jessee, "Lawyer Brenner Talks about Quality Standards," Patient Care 16 (15 May 1982): 161.

Of the twenty-seven liability claims filed in 1982, sixteen, or approximately 60 percent, of the medical records would have been singled out for additional review had generic screening been in effect during 1982. Two of the cases not identified by generic screening were reported via incident reports. Four cases were not identified by generic screening or incident reporting, and a generic screening

determination could not be made for two cases because their medical records could not be located. Therefore, had generic screening been used in conjunction with the existing incident reporting system, eighteen (67 percent) of the twenty-seven claims for liability could have possibly been identified in advance. Though this is short of the 75 percent identification objective established as a criterion for an effective program, it does represent significant progress, and the number identified could have possibly been even higher if generic criteria designed specifically for TAMC had been utilized.

The major disadvantage of generic screening, like incident reporting, is that it is essentially a retrospective process. In addition to offering the advantage of better identification of PCEs, generic screening also overcomes the following problems noted with incident reporting:

1. Majority of incident reports are for falls and medication errors.
2. Physicians infrequently fill out incident reports.
3. Without a standard or a basis for comparison, incident reports lose their value.

The second alternative to incident reporting is a comprehensive process generally referred to as the systems approach. Of the many "systematic" methods of resolving risk management problems to which the literature refers, the one most often mentioned and the one that seems to be the most comprehensive is a commercial package offered by Marsh & McLennan, Inc., a professional liability group in California. This methodology evolved from the 1976 California Medical Insurance Feasibility Study, which devised twenty general outcome criteria which

were used to retrospectively review over 20,000 medical records from twenty-three hospitals. Marsh & McLennan, Inc., adapted the twenty general outcome screening criteria into a professional liability warning system.¹⁷

These twenty criteria were incorporated into a centralized program known as Medical Management Analysis (MMA), which was field testing and refined at a number of hospitals in early 1979.¹⁸ After the effectiveness of this program was documented, a second program known as the Incident Report Tracking System (IRTS) was added to complete the package.¹⁹

Fact sheets provided by Marsh & McLennan provide the following descriptions and attributes of MMA and IRTS:

Medical Management Analysis (MMA) is a professional liability warning system designed to assist in the improvement of the quality of patient care and reduce the likelihood of malpractice suits. Proper implementation of MMA permits

- 1) early identification and reporting of adverse patient occurrences (APO's) for immediate evaluation and action,
- 2) prevention of repetitive adverse patient events by continuous monitoring of, and timely action on, patterns of APO's,
- 3) coordination of all hospital and medical staff efforts on quality assurance and risk management.²⁰

The computerized Incident Report Tracking System (IRTS) is designed to replace the traditional incident report in hospitals. This computerized approach facilitates timely analysis of aggregated incidents for the improvement of patient care and for loss control purposes. Proper implementation of IRTS permits

- (1) early identification of high risk areas in the hospital;
- (2) early identification of potential claims;
- (3) correlation of incident reports to actual claims; and
- (4) regular evaluation of confidential incident, trend reports by the hospital's Quality Assurance Committee.²¹

When these two programs are combined, a comprehensive risk management system results. All of the positive aspects of both incident

reporting and generic screening are provided in addition to other advantages. For example, while incident reporting and generic screening are essentially retrospective in nature, MMA provides concurrent record screening. The computerized aspect of IRTS offers the using hospital an opportunity for indepth analyzing and for ascertaining trend data on incident experiences. Additionally, the incident report form utilized for IRTS lists virtually all types of adverse events which would be likely to occur; therefore, the user is not left wondering whether or not an event is reportable.

The major disadvantage of this program is that it is very labor intensive, as would be any concurrent review procedure. For example, the MMA suggests that the patient's record be reviewed at time of admission, every four days during the hospital stay, and at time of discharge. More detailed information about MMA and IRTS, to include reporting forms, is attached as Appendix F.

This discussion of the Marsh & McLennan program is meant not to advocate the purchase of the corporation's package but rather to point out the direction of risk management programs in civilian hospitals and the emphasis the civilian hospital industry has placed upon reducing financial loss from liability claims. Nevertheless, the Army Medical Department could surely benefit from studying programs such as MMA, IRTS, and generic screening and adapting their positive aspects. These programs have been proven cost effective. For example, the Good Samaritan Medical Center, Phoenix, Arizona, was able to reduce its annual insurance premium by \$1.2 million after changing to a comprehensive systematic approach to risk management.²²

Footnotes

¹William R. Fifer, "Risk Management and Quality Assurance: Integration for Optimal Effectiveness," Quality Review Bulletin 5 (August 1979): 9.

²Joyce W. Craddick, "The Medical Management Analysis System: A Professional Liability Warning Mechanism," Quality Review Bulletin 5 (April 1979): 2.

³U.S., Department of the Army, Medical Record and Quality Assurance Administration, Army Regulation 40-66, with Changes 1 and 2 (Washington, D.C.: Department of the Army, June 15, 1980), p. 9-6.

⁴Ibid., p. 9-5.

⁵James E. Orlikoff, William R. Fifer, and Hugh P. Greeley, Malpractice Prevention and Liability Control for Hospitals (Chicago: American Hospital Association, 1981), pp. 44-45.

⁶"Intelligence Report," Parade Magazine, February 27, 1983, p. 11.

⁷Ibid.

⁸Orlikoff, et al., p. 19.

⁹Neil Roland, "Couple Gets Record \$12 Million in Army Medical Malpractice Suit," Army Times 43 (28 March 1983): 4.

¹⁰Maria R. Traska, "Program Spots Risk Areas and Trends," Modern Healthcare 8 (December 1978): 48.

¹¹Bobbi Beck and Karen Hardwick, "A Concurrent Surgical Mini-audit Procedure," Quality Review Bulletin 7 (March 1981): 21.

¹²Joseph B. Davis and Barry S. Bader, "The Systems Approach to Patient Safety," Quality Review Bulletin 5 (February 1979): 17.

¹³William R. Fifer, "Risk Management and Medical Malpractice: An Overview of the Issues," Quality Review Bulletin 5 (April 1979): 9.

¹⁴Bobbi Beck, Karen Hardwick, Bobbie Ingram, and Ann Taylor, "Improving the Effectiveness of Generic Outcome Screening Criteria," Quality Review Bulletin 6 (January 1980): 5.

¹⁵Lawrence H. Brenner and William F. Jessee, "Lawyer Brenner Talks about Quality Standards," Patient Care 16 (15 May 1982): 161.

¹⁶"Generic Screening Effective in Problem Identification," Hospital Peer Review 6 (November 1981): 129.

¹⁷Craddick, pp. 2-3.

¹⁸*Ibid.*, p. 3.

¹⁹Interview with Robert O. DeCleene, Marketing Coordinator, Marsh & McLennan, Inc., Honolulu, Hawaii, March 14, 1983.

²⁰Marsh & McLennan, Inc., Medical Management Analysis (MMA), a fact sheet (San Francisco: By author, n.d.), p. 1.

²¹Marsh & McLennan, Inc., Incident Report Tracking (IRTS) System, a fact sheet (San Francisco, Calif.: By author, n.d.), p. 1.

²²Donna Leigh Yanish, "Aggressive Incident Reporting Saves Hospitals Millions of Dollars," Modern Healthcare 9 (December 1979): 64.

CHAPTER III

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Using risk management data from Tripler Army Medical Center, a methodology has been developed through the course of this research study whereby the effectiveness of an Army medical treatment facility's risk management program can be evaluated. The comparison of liability claims data with potentially compensable events identified through incident reporting and other methods using established criteria is an objective method of evaluating effectiveness of risk management programs. Further, this study has shown conclusively that risk management programs, such as that of the Army Medical Department, which rely primarily upon incident reporting tend to focus on slips and falls to the exclusion of medically related patient injuries.

The recommendations made in this study, if adopted, will significantly improve the risk management program at Tripler Army Medical Center. Although this study focused upon only one Army medical treatment facility, the methodology developed and the recommendations made could have Armywide application, for, as stated by the Medical Claims Officer for the U.S. Army Health Services Command: "The current incident reporting system is not solving the malpractice problem."¹

Recommendations

Based upon the results of this study, these recommendations

are made:

1. First, and most important, is that the current risk management program be changed to a more comprehensive systematic approach involving automated tracking of incident reports and concurrent and retrospective generic screening. If this is not feasible in the near term, it is then recommended that the current incident-reporting system be augmented by the addition of generic screening criteria to the risk management program, preferably Armywide but as a minimum at TAMC.
2. That the historical data pertaining to incident reports which were compiled during the course of this study be entered into a microcomputer and that future incident reports be similarly entered. Though the task of entering approximately 800 reports will be somewhat laborious, the future benefits of rapid identification of trends and problem areas would more than justify the effort. With a program such as this, the Commander, TAMC, will be provided trend data as frequently as desired. Additionally, because of the cost savings resulting from the early identification of adverse events, the purchase of the computer is easily justifiable under the Quick Return on Investment Program.
3. That an education program to inform the staff of the importance and the methodology of incident reporting should be developed. In this regard, a definition must be established for physician-related incidents and a severity threshold for such incidents beyond which reporting is mandated must be designated. Data collected over a ten-year period at the U. S. Army Health Services Command show

that 15 percent of claims are system failures and 85 percent are physician related.³

4. That a full-time risk manager position be established. This is critically important if the required functions are to be performed effectively.
5. That the supporting Medical Claims Staff Judge Advocate be required to provide the hospital commander with a monthly report identifying the status of pending cases, an analysis of new cases, and the pertinent historical trend data, such as those developed in this study. From this report, high risk areas could be identified and action could be taken to preclude future problems.
6. That all incident reports be routed directly to the risk manager within twenty-four hours to insure that appropriate actions can be taken expeditiously. The risk manager will determine those reports requiring the attention of department and service chiefs.

Implementation of the above recommendations will significantly reduce the financial losses occurring in Army hospitals resulting from liability claims. Collection and analysis of data are essential in the conduct of risk management program; however, regardless of how revealing the data are, they are "of little value if someone is not held accountable for follow-up correction and prevention."⁴

Footnotes

¹Interview with Major Jay Manning, Medical Claims Officer, Office of the Staff Judge Advocate, Headquarters, Health Services Command, Fort Sam Houston, Texas, March 7, 1983.

²William R. Fifer, "Risk Management and Quality Assurance: Integration for Optimal Effectiveness," Quality Review Bulletin 5 (August 1979): 18.

³Interview with Captain Philip Savoie, Legal Officer, Office of the Staff Judge Advocate, Headquarters, Health Services Command, Fort Sam Houston, Texas, March 8, 1983.

⁴Edna M. Swartzbeck and W. Lloyd Milligan, "A Comparative Study of Hospital Incidents," Nursing Management 13 (January 1982): 39.

APPENDIX D

NUMBER AND AREA OF SELF-INFLICTED INJURIES,
1980-1982

NUMBER AND AREA OF FALLS, 1980

MONTH AREA	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Cumulative (% of Total)
WARD 16	6			2			2	1	1	2	1	3	18 (9.6)
18		1	1	3	3	1	1		1		2	1	14 (7.5)
21	2	1	6	4	3	1		4		1	1	1	24 (12.9)
(CCU) 23	2			1						1			4 (2.1)
(ICU) 23								1					1 (0.5)
(PCU) 23	3	3		3	2							1	12 (6.4)
24			1		1		1		1				4 (2.1)
25			1		1	4	1	1				2	10 (5.3)
27	1			4	1	3		1					10 (5.3)
32	1	1	2	3	1		2	3		1	2	1	17 (9.1)
33	1	1			1			1					4 (2.1)
34										2		1	3 (1.6)
(SICU) 40	1							1					2 (1.0)
42	2	2				1		3			3		11 (5.9)
43		1		1		1	3	4			2		12 (6.4)
44			1			1	3	1				2	8 (4.4)
51			1	2				2		1	1		7 (3.7)
52	1		1		1			1					4 (2.1)
70					1	1	1						3 (1.6)
72								1		1			2 (1.0)
81													
82	1		1					3		1		1	7 (3.7)
Labor & Delivery								1					1 (0.5)
PT/OT	1			1				1		1		3	7 (3.7)
Common Areas		1								1			2 (1.0)
Emergency Room			1										1 (0.5)
TOTAL	22	11	15	25	15	13	14	30	3	12	12	16	188 (100)

NUMBER AND AREA OF FALLS, 1981

MONTH AREA	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Cumulative (% of Total)
WARD 16		2	2		3	1	3	1	4	4	1	1	22 (15.7)
18	2	3		1			1	4	1	1			13 (9.3)
21		1		1		1	6	2	3	1	3	3	21 (14.9)
CCU) 23									1				1 (0.7)
ICU) 23								1					1 (0.7)
PCU) 23								1	1		1		3 (2.1)
24			1					1	1				3 (2.1)
25			1			1	1			1	1	1	6 (4.3)
27			1									1	2 (1.4)
32		1	1	1	1			1					5 (3.5)
33		1		2		1	1	1		1			7 (5.0)
34													
(SICU) 40			1				2						3 (2.1)
42	1	2	3	2	1		2	1	1		2		15 (10.6)
43	2				2		1			3		1	9 (6.4)
44		1									1		2 (1.4)
51	1												1 (0.7)
52	1	1	1	1	2	1					1		8 (5.7)
70									1				1 (0.7)
72											1		1 (0.7)
81					1			2					3 (2.1)
82						2							2 (1.4)
Labor & Delivery	1		2										3 (2.1)
PT/OT			1		3	1		1		1			7 (5.0)
Common Areas					1								1 (0.7)
Emergency Room													
TOTAL	8	13	14	8	14	8	17	16	13	12	11	7	141 (100.0)

NUMBER AND AREA OF FALLS, 1982

MONTH REA	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Cumulative (% of Total)
ARD 16	1	2	1		2	2	1	1	1				11 (7.4)
18	2	2			4		2	1	1			3	15 (10.1)
21	3	1	6		4	5	4	5	4	2	2	5	41 (27.7)
CU) 23													
CU) 23		1											1 (0.7)
CU) 23		1	2										3 (2.0)
24							1	1					2 (1.4)
25	1	2				1						2	7 (4.7)
27							3		1		2		6 (4.1)
32		1				1			1		1		4 (2.7)
33		1	1	3									5 (3.4)
34				1			5				1		7 (4.7)
ICU) 40													
42	1	4	1	1		1	1	2	1	2		2	16 (10.7)
43				1	3			1				1	6 (4.1)
44								1				1	2 (1.4)
51			1				1						2 (1.4)
52		2			1								3 (2.0)
70			2		1		1			1			5 (3.4)
72		1			1							1	3 (2.0)
81				1									1 (0.7)
82				1							2		3 (2.0)
for & livery	1												1 (0.7)
OT	1							1	1				3 (2.0)
nmon as													
ergency om					1								1 (0.7)
TAL	10	18	14	8	17	10	19	14	10	5	8	15	148 (100.0)

APPENDIX B

NUMBER AND AREA OF MEDICATION ERRORS,

1980-1982

NUMBER AND AREA OF MEDICATION ERRORS, 1980

MONTH AREA	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Cumulative (% of Total)
WARD 16									1			1	2 (3.0)
18	3	2								1			6 (8.9)
21								2	1				3 (4.5)
(CCU) 23						1		3					4 (5.9)
(ICU) 23						1	1						2 (3.0)
(PCU) 23				1	1			1					3 (4.5)
24	1		2		1	1	1					4	10 (14.9)
25			1					1	1				3 (4.5)
27													
32	1												1 (1.5)
33													
34			1							1	1		3 (4.5)
(SICU) 40		1	3					2					6 (8.9)
42				1		1							2 (3.0)
43													
44	1												1 (1.5)
51	1							1					2 (3.0)
52													
70			1										1 (1.5)
72					1		2						3 (4.5)
81	1			2					1				4 (5.9)
82													
Labor & Delivery		1									1		2 (3.0)
Pharmacy					2			1	1	1			5 (7.5)
Allergy Clinic		1								1			2 (3.0)
Special Care Nursery													
Newborn Nursery	1												1 (1.5)
Family Practice Clinic			1										1 (1.5)
TOTAL	9	5	9	4	5	4	4	11	5	4	2	5	67 (100.0)

NUMBER AND AREA OF MEDICATION ERRORS, 1981

MONTH AREA	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Cumulative (% of Total)
WARD 16										1			1 (1.3)
18		3		1	1			2	1	1			9 (11.5)
21	1					1	2					1	5 (6.4)
(CCU) 23		1					1			1			3 (3.8)
(ICU) 23		1	1					1					3 (3.8)
(PCU) 23			1	3	1	1			1	3		1	11 (14.1)
24												1	1 (1.3)
25													
27													
32	1			1									2 (2.6)
33									1				1 (1.3)
34	1		2										3 (3.8)
(SICU) 40							1						1 (1.3)
42		2		1		1	1					1	6 (7.7)
43					1								1 (1.3)
44													
51									1				1 (1.3)
52													
70	1	1											2 (2.6)
72													
81			1	1					1	1			4 (5.1)
82													
Labor & Delivery		1							1				2 (2.6)
Pharmacy	2			1		2				1			6 (7.7)
Allergy Clinic					1								1 (1.3)
Special Care Nursery			1			1	1	1		1	1	3	9 (11.5)
Newborn Nursery					2								2 (2.6)
Family Practice Clinic													
TOTAL	6	9	6	9	7	7	7	4	6	9	1	7	78 (100.0)

NUMBER AND AREA OF MEDICATION ERRORS, 1982

MONTH AREA	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Cumulative (% of Total)
WARD 16	1					1		1					3 (4.2)
18	1	2	1			2			2			1	9 (12.5)
21	2	1	1	1	1	1	2	1	2	4	1	1	18 (25.0)
(CCU) 23													
(ICU) 23	2							1					3 (4.2)
(PCU) 23							1						1 (1.4)
24	2										3		5 (6.9)
25													
27													
32						1	1						2 (2.8)
33													
34											1		1 (1.4)
(SICU) 40					2					1			3 (4.2)
42			1	1				1	2				5 (6.9)
43													
44								1					1 (1.4)
51													
52			1				1		1				3 (4.2)
70													
72									2				2 (2.8)
81	2			1	2	1			1			1	8 (11.1)
82											1		1 (1.4)
Labor & Delivery							1						1 (1.4)
Pharmacy			1						3	1			5 (6.9)
Allergy Clinic													
Special Care Nursery												1	1 (1.4)
Newborn Nursery													
Family Practice Clinic													
TOTAL	10	3	5	3	5	6	6	5	13	6	6	4	72 (100)

APPENDIX C

NUMBER AND AREA OF MEDICAL TREATMENT

ERRORS, 1980-1982

NUMBER AND AREA OF MEDICAL TREATMENT ERRORS, 1980

MONTH AREA	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Cumulative (% of Total)
WARD 16										1			1 (9.1)
18													
21													
(CCU) 23													
(ICU) 23				1									1 (9.1)
(PCU) 23													
24													
25													
27													
32													
33													
34													
(SICU) 40			2										2 (18.2)
42													
43													
44													
51													
52													
70													
72													
81													
82								1					1 (9.1)
Labor & Delivery													
Operating Room				2									2 (18.2)
Pharmacy													
Allergy Derm. Clinic				1									1 (9.1)
Special Care Nursery		1						1			1		3 (27.2)
Newborn Nursery													
Family Practice Clinic													
TOTAL		1	2	4				2		1	1		11 (100.0)

[illegible]

NUMBER AND AREA OF MEDICAL TREATMENT ERRORS, 1982

MONTH AREA	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Cumulative (% of Total)
WARD 16													
18						1							1 (4.5)
21					1	1							2 (9.2)
(CCU) 23													
(ICU) 23													
(PCU) 23			1										1 (4.5)
24			1		2								3 (13.7)
25													
27													
32					1			1					2 (9.2)
33		1											1 (4.5)
34													
(SICU) 40			1										1 (4.5)
42				1									1 (4.5)
43													
44													
51							1						1 (4.5)
52									1			2	3 (13.7)
70													
72													
81													
82													
LABORATORY Recovery Room									1				1 (4.5)
DELIVERY Operating Room												1	1 (4.5)
PHARMACY Allergy Clinic													
SPECIAL CARE Pediatrics						1							1 (4.5)
NURSERY Newborn Nursery				1									1 (4.5)
FAMILY Hematology/Oncology							1	1					2 (9.2)
CLINIC													
TOTAL		1	3	2	4	3	2	2	2			3	22 (100.0)

APPENDIX A

NUMBER AND AREA OF FALLS, 1980-1982

NUMBER AND AREA OF SELF-INFLICTED INJURIES, 1980

MONTH AREA	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Cumulative (% of Total)
WARD 16							1						1 (9.0)
21													
24													
25					1				4	1	1		7 (63.6)
27						1		1		1			3 (27.3)
33													
TOTAL					1	1	1	1	4	2	1		11 (100.0)

NUMBER AND AREA OF SELF-INFLICTED INJURIES, 1981

MONTH AREA	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Cumulative (% of Total)
WARD 16													
21													
24			1		1	1	2	2			1		8 (72.7)
25													
27		1	1									1	3 (27.3)
33													
TOTAL		1	2		1	1	2	2			1	1	11 (100.0)

NUMBER AND AREA OF SELF-INFLICTED INJURIES, 1982

MONTH AREA	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Cumulative (% of Total)
WARD 16													
21		1											1 (12.5)
24													
25						1	1		1	1	1		5 (62.5)
27											1		1 (12.5)
33							1						1 (12.5)
TOTAL		1				1	2		1	1	2		8 (100.0)

APPENDIX E

NUMBER AND AREA OF EQUIPMENT FAILURES, 1980-1982

NUMBER AND AREA OF EQUIPMENT FAILURES, 1980

MONTH AREA	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Cumulative (% of Total)
WARD 21													
23 (ICU)													
23 (PCU)													
24													
40 (SICU)					1								1 (25.0)
42													
52													
Physical Therapy													
Special Care Nursery			1										1 (25.0)
Recovery Room										1			1 (25.0)
Operating Room													
Hemodialysis										1			1 (25.0)
TOTAL			1		1					1			4 (100.0)

NUMBER AND AREA OF EQUIPMENT FAILURES, 1981

MONTH AREA	JAN	FEB	MAR	APR	MAR	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Cumulative (% of Total)
WARD 21						1							1 (7.1)
23 (ICU)												1	1 (7.1)
23 (PCU)								1					1 (7.1)
24													
40 (SICU)									1				1 (7.1)
42									1				1 (7.1)
52						1							1 (7.1)
Physical Therapy			1										1 (7.1)
Special Care Nursery									1	1		1	3 (21.5)
Recovery Room													
Operating Room			1	1				1	1				4 (28.6)
Hemodialysis													
TOTAL			2	1		2		2	4	1		2	14 (100.0)

NUMBER AND AREA OF EQUIPMENT FAILURES, 1982

MONTH AREA	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Cumulative (% of Total)
WARD 21													
23 (ICU)		1											1 (12.5)
23 (PCU)													
24											1		1 (12.5)
40 (SICU)				1								1	2 (25.0)
42													
52													
Physical Therapy													
Special Care Nursery												1	1 (12.5)
Recovery Room													
Operating Room		1				1					1		3 (37.5)
Hemodialysis													
TOTAL		2		1		1					2	2	8 (100.0)

APPENDIX F

MARSH & McLENNAN, INC., FACT SHEETS

MEDICAL MANAGEMENT ANALYSIS (MMA)

Medical Management Analysis (MMA) is a professional liability warning system designed to assist in the improvement of the quality of patient care and reduce the likelihood of malpractice suits. Proper implementation of MMA permits

- 1) early identification and reporting of adverse patient occurrences (APO's) for immediate evaluation and action,
- 2) prevention of repetitive adverse patient events by continuous monitoring of, and timely action on, patterns of APO's,
- 3) coordination of all hospital and medical staff efforts on quality assurance and risk management.

MMA is based on the concurrent review of medical records while patients are still in the hospital, using a set of comprehensive, objective outcome screening criteria that apply to all records regardless of reason for hospitalization. Emergency Department screening criteria have also been developed. The MMA system permits screening of patient care and detection of problems relating to both hospital and medical staff.

Initial record screening is done by non-physician personnel on a regular, continuous basis. Review of records with variations from the criteria is done by physician reviewers, either immediately if serious or within a specified time period if non-serious. When APO's are confirmed by secondary screening, reports are channeled to a program coordinator and/or a centralized hospital-medical staff committee responsible for patient safety and quality assurance. This person or committee will be closely linked to the claims management and to other committees and departments of the hospital and medical staff to assure prompt action and follow-up on problems.

The outstanding features of the MMA system which differentiate it from most other systems currently in use are:

- 1) Physician involvement. (The majority of expensive hospital-based malpractice claims also name one or more physicians.)
- 2) Concurrent record screening, evaluation and reporting. (The more rapidly an adverse event is identified and acted upon, the lower the potential liability, and the less likely is the repetition of the event.)
- 3) Coordination of all presently fragmented data collection, quality assurance and risk management activities into a time and cost-effective program to meet both internal and external requirements.
- 4) Flexibility of the system as it is adapted to the needs and problems of individual hospitals and medical staffs, and then adopted as their own program.

MMR SCREENING CRITERIA

[illegible]

1. The first part of the document is a letter from the President of the United States to the Congress, dated January 1, 1861. It is a very important document, as it sets out the President's policy on the secession of the Southern States. The President states that he is bound by the Constitution to preserve the Union, and that he will use all the power at his disposal to do so. He also states that he will not recognize the secession of any State, and that he will treat all the States as equal.

INCIDENT REPORT TRACKING SYSTEM (IRTS)

The computerized Incident Report Tracking System (IRTS) is designed to replace the traditional incident report in hospitals. This computerized approach facilitates timely analysis of aggregated incidents for the improvement of patient care and for loss control purposes. Proper implementation of IRTS permits

- (1) early identification of high risk areas in the hospital;
- (2) early identification of potential claims;
- (3) correlation of incident reports to actual claims; and,
- (4) regular evaluation of confidential incident trend reports by the hospital's Quality Assurance Committee.

The program definition of an incident is any occurrence which is not consistent with the desired operation of the hospital or the care of the patient. The IRTS trend data is based on the information contained on the Incident Report Tracking form. This form is unique in several respects. The first page consists of a narrative account of the incident which is completed by hospital personnel who were witness to or involved in the incident. The tracking form consists of a check-box format which covers details of the incident and is completed by hospital supervisory personnel.

The IRTS forms are computer processed by Marsh & McLennan to provide feedback to hospitals on the various aspects of incidents such as frequency, severity and location. The Confidential Statistical Summary reports can be generated on a monthly, quarterly and annual basis. The IRTS is flexible in that special studies can be programmed to focus attention on particular types of incidents. The end result is an incident reporting system which is customized to meet the needs of the individual hospital.

The Confidential Statistical Summary reports are referred to a joint hospital-medical staff committee responsible for quality assurance and risk management. This committee should also be closely linked to claims management and the Medical Management Analysis (MMA) quality assurance program to assure prompt action and follow-up on identified problems.

The principal features of the IRTS which separate it from most other systems currently in use are:

- (1) involvement of all hospital staff including all ancillary departments as well as the nursing and medical staffs;
- (2) timely reporting, evaluation and feedback of adverse events (The more rapidly an adverse event is identified and acted upon, the lower the potential for liability and the tendency for recurrence of the event);
- (3) coordination of risk management and quality assurance activities by the hospital and the medical staff;
- (4) the educational, non-punitive nature of incident reporting; and,
- (5) flexibility of the system which allows for special studies and data displays to be formatted to meet the specific needs of a particular hospital.

A 00019

INCIDENT REPORT

QUESTIONS

HOSPITAL NUMBER

STATUS
000000

ATTENDING
PHYSICIAN
CALLED
ACCIDENT

AMPLIFIED

1. NAME OF PATIENT
2. ROOM
3. DATE
4. TIME
5. NATURE OF INJURY
6. CAUSE OF INJURY
7. TREATMENT
8. PHYSICIAN'S SIGNATURE
9. NURSE'S SIGNATURE
10. WITNESSES
11. COMMENTS

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SAFETY CLUES: MARK ONE
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 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2014. 2015. 2016. 2017. 2018. 2019. 2020. 2021. 2022. 2023. 2024. 2025. 2026. 2027. 2028. 2029. 2030. 2031. 2032. 2033. 2034. 2035. 2036. 2037. 2038. 2039. 2040. 2041. 2042. 2043. 2044. 2045. 2046. 2047. 2048. 2049. 2050. 2051. 2052. 2053. 2054. 2055. 2056. 2057. 2058. 2059. 2060. 2061. 2062. 2063. 2064. 2065. 2066. 2067. 2068. 2069. 2070. 2071. 2072. 2073. 2074. 2075. 2076. 2077. 2078. 2079. 2080. 2081. 2082. 2083. 2084. 2085. 2086. 2087. 2088. 2089. 2090. 2091. 2092. 2093. 2094. 2095. 2096. 2097. 2098. 2099. 2100. 2101. 2102. 2103. 2104. 2105. 2106.

MEDICAL MANAGEMENT ANALYSIS (MMA) AND
INCIDENT REPORT TRACKING SYSTEM (IRTS)

73

QUESTIONS AND ANSWERS

1. Q: What is MMA?

A: Medical Management Analysis (MMA) is a professional liability warning system designed to assist in the improvement of the quality of patient care and reduce the likelihood of malpractice suits. MMA is based on the concurrent review of medical records by trained hospital staff using occurrence screening criteria.

2. Q: What is IRTS?

A: The Incident Report Tracking System (IRTS) is a computerized method of documenting occurrences which are not consistent with the desired operation of the hospital or the care of the patient. The IRTS identifies areas of potential liability for the hospital.

3. Q: How do these two programs help us meet our accreditation requirements?

A: Both programs help to fulfill the Quality Assurance Standard of the Joint Commission on Accreditation of Hospitals by pinpointing problems concerning patient care for peer review and action. It is significant to know that all hospitals currently utilizing MMA and IRTS have attained full accreditation from the JCAH.

4. Q: Do the two programs have to be used together?

A: The two programs complement each other but are not mutually-inclusive. We recommend that MMA and IRTS be used in conjunction with each other to gain the maximum benefits from the occurrence reporting. Unusual occurrences and/or incidents can be documented in the medical record or reported via an incident report. Dual-reporting systems increase the yield of reported adverse patient occurrences which need clinical and/or administrative attention. There are fewer "surprises" when both systems are utilized.

5. Q: Can MMA data be used for credentialing of the medical staff and/or allied health professionals?

A: Yes, MMA trends by department and/or provider are a useful and objective means to assist in the granting of initial clinical privileges and reappointments. They can also address areas where continuing medical education is needed, or bylaws, regulations, policies and procedures should be enforced or updated.

/continued

6. Q: What is the average turnaround time for the data processing of the IRTS reports?
- A: As a general rule, the turnaround time for the IRTS reports is 7 - 10 working days from the stated cycle cut-off date.
7. Q: How is confidentiality of the MMA and IRTS data maintained?
- A: Most states have specific statutes protecting the confidentiality of medical staff peer review information. We recommend that the MMA and IRTS reports be made a part of the medical staff's Quality Assurance Committee records to enhance this protection. Sample policies and procedures for routing the MMA and IRTS reports are available for your consideration. Specific guidelines need to be developed at your hospital concerning the careful handling of these reports. The Marsh and McLennan consultants are available to assist in this effort.
8. Q: How long would it take to implement MMA and IRTS at my hospital?
- A: Implementation time varies depending on the size of the hospital and the staff resources available to support the programs. MMA and IRTS are not meant to be implemented on a "self-starter basis". Ongoing consultation and assistance from the Marsh and McLennan consultants is necessary to ensure a successful program.
9. Q: Who are the Marsh and McLennan consultants?
- A: Our staff consists of a Program Manager, two Physician Consultants, a Risk Manager and two Quality Assurance Consultants who are available to assist in the on-site implementation of the MMA and IRTS.
10. Q: How can I request the MMA and IRTS services for my hospital?
- A: You can either call or write:

Mr. Gary B. Lanham, M.H.A.
Vice President
Marsh & McLennan Insurance Management Services, Incorporated
P. O. Box 3880
San Francisco, California 94119

(415) 393-5256

A business proposal can be prepared by our consultants to answer specific questions for your hospital concerning staffing considerations time-frames for implementation and an estimate of the costs involved.

SELECTED BIBLIOGRAPHY

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Government Documents and Publications

Bing v. Thunig, 2 N.Y. 2d 656, 143 N.E. 2d 3, 163 N.Y.S. (1957).

Darling v. Charleston Memorial Hospital, 33 Ill. 2d 326, 211 N.E. 2d 253 (1965).

Gonzales Act. U. S. Code, Annotated, vol. 1 (1979).

U.S. Department of the Air Force. "Risk Management in Medical Care." Air Force Regulation 168-13 (Draft). Washington, D.C.: Department of the Air Force, n.d.

U.S. Department of the Army. Medical Record and Quality Assurance Administration. Army Regulation 40-66, with Changes 1 and 2. Washington, D.C.: Department of the Army, June 15, 1980.

Books

Brown, Bernard L. Risk Management for Hospitals. Germantown, Md.: Aspen Systems Corporation, 1977.

Duke Law Journal. Medical Malpractice. Cambridge, Mass.: Ballinger Publishing Co., 1977.

Kramer, Charles. Medical Malpractice. 4th ed. New York: Practising Law Institute, 1976.

Orlikoff, James E.; Fifer, William R.; and Greeley, Hugh P. Malpractice Prevention and Liability Control for Hospitals. Chicago: American Hospital Association, 1981.

Periodicals

Adelman, D. N. "Advisory Panel Improves Communication, Reduces Risks." Hospitals 55 (16 January 1981): 59-60.

"An Arbitration Plan for Patient, Hospital and Physician." Medical Malpractice and Cost Containment Journal 1 (January 1980): 356-64.

Ashby, John L.; Stephens, Sharmon K.; and Pearson, Stephanie B. "Elements in Successful Risk Reduction Programs." Hospital Progress 58 (July 1977): 60-64, 75.

- Baxter, C. E. "What Every Nurse Manager Should Know about Risk Management." Health Services Manager 13 (August 1980): 4-6.
- Beck, Bobbi, and Hardwick, Karen. "A Concurrent Surgical Mini-audit Procedure." Quality Review Bulletin 7 (March 1981): 21-24.
- Beck, Bobbi; Hardwick, Karen; Ingram, Bobbie; and Taylor, Ann. "Improving the Effectiveness of Generic Outcome Screening Criteria." Quality Review Bulletin 6 (January 1980): 5-7.
- "Bill Would Permit Malpractice Claims." Army Times 43 (28 March 1983): 4.
- Boone, Charles W. "Well Planned Program Credited with Drop in Malpractice Claims." Hospitals 56 (1 April 1982): 37.
- Brantley, Grace C. "A Pilot Study of Risk Management Programs in Large Hospitals." Journal of the American Medical Record Association 53 (February 1982): 68-72.
- Brenner, Lawrence H., and Jessee, William F. "Dr. Jessee Talks about Hazards." Patient Care 15 (15 May 1982): 163-66, 169.
- Brenner, Lawrence H., and Jessee, William F. "Dr. Jessee Talks about Patterns of Care." Patient Care 16 (15 May 1982): 136-37, 140, 144-45, 147.
- Brenner, Lawrence H., and Jessee, William F. "Jessee and Brenner Talk about Their Work." Patient Care 16 (15 May 1982): 169-72, 174, 226.
- Brenner, Lawrence H., and Jessee, William F. "Lawyer Brenner Talks about Quality Standards." Patient Care 16 (15 May 1982): 147-49, 153, 156-61, 163.
- Brook, Robert H., and Williams, Kathleen N. "Malpractice and the Quality of Care." Annals of Internal Medicine 88 (June 1978): 836-38.
- Brown, Bernard L. "Risk Management." American Journal of Infection Control 9 (August 1981): 82-86.
- Collins, Earl M. "Quality Assurance and Risk Management: Linking Both Benefits All." Group Practice 29 (April 1980): 11-12.
- Collins, Paul. "Hospital Aims Quality Assurance Risk Management Education at Staff." Hospitals 55 (1 June 1981): 93-95.
- Craddick, Joyce W. "The Medical Management Analysis System: A Professional Liability Warning Mechanism." Quality Review Bulletin 5 (April 1979): 2-8.

- Craddick, Joyce W. "Use Existing Motivations to Involve Physicians in Risk Management." Hospitals 55 (1 June 1981): 63-64, 85.
- Curtin, Leah L. "Honesty, Incident Reports and Risk Management." Nursing Management 12 (October 1981): 7-8.
- Dankmyer, Todd, and Groves, James. "Taking Steps for Safety's Sake." Hospitals 51 (16 May 1977): 60-62, 66.
- Davis, Joseph B., and Bader, Barry S. "The Systems Approach to Patient Safety." Quality Review Bulletin 5 (February 1979): 17-21.
- Donovan, Raymond J., and Bader, Barry S. "The Systems Approach to Patient Safety: Role of the Medical Staff." Quality Review Bulletin 5 (April 1979): 16-20.
- Dudley, Robert H. "Risk Management: The Patient Representative's Role." Quality Review Bulletin 6 (April 1980): 4-5.
- Dwyer, Joan S. "Hospital Incident Reports: Protected from Discovery." Hospital Progress 63 (October 1982): 38-39.
- Dwyer, Joan S. "Policies and Procedures: First Line of Defense in Legal Actions." Hospital Progress 63 (March 1982): 60-61, 64.
- "Educational Programs Reduce Liability." Modern Healthcare 9 (December 1979): 66-67.
- Elnicki, R. A. "Contribution of Patient and Hospital Characteristics to Adverse Patient Incidents." Health Services Research 15 (Winter 1980): 397-414.
- Ferguson, Joseph W. "Risk Management and Quality Assurance: Partners in Liability Reduction." Hospitals 53 (16 February 1979): 42, 46, 201.
- Fifer, William R. "Risk Management: The Art of Preventing 'People Failure.'" Trustee 30 (September 1977): 52-53.
- Fifer, William R. "Risk Management and Medical Malpractice: An Overview of the Issues." Quality Review Bulletin 5 (April 1979): 9-13.
- Fifer, William R. "Risk Management and Quality Assurance: Integration for Optimal Effectiveness." Quality Review Bulletin 5 (August 1979): 15-19.
- Freilich, Herbert. "Public Hospital System Institutes Loss-Control Program." Hospitals 54 (16 May 1980): 10, 14.

- Friend, Gary. "QA/RM Program Streamlines Work, Merges Functions." Hospital Peer Review 4 (November 1979): 145-46.
- "Generic Screening Effective in Problem Identification." Hospital Peer Review 6 (November 1981): 129-31.
- Gregory, D. R. "Does Medicine Need Risk Management?" Legal Aspects of Medical Practice 7 (January 1979): 4.
- Grose, Vernon L. "Managing Medical Malpractice Risk by System Science." Journal of Medical Systems 6 (February 1982): 89-103.
- Hirsh, H. L. "Hospital Risk Management." Urban Health 8 (November 1979): 24-25.
- Hirsh, H. L. "Risk Management--The Physician's Role." Legal Aspects of Medical Practice 7 (January 1979): 49-51.
- Holder, Angela R. "The Lawyer's Role in Risk Management." Quality Review Bulletin 5 (April 1979): 25-26.
- "Intelligence Report." Parade Magazine, February 27, 1983, pp. 10-11.
- Jessee, William F. "Strategies to Achieve Changes in QA/RM Programs Identified." Hospital Peer Review 6 (July 1981): 85-86.
- Jessee, William F. "Using Epidemiological Tools to Compare QA and RM." Hospital Peer Review 6 (April 1981): 42-44.
- Jones, Mike. "Training Model Helps Staff Eliminate Risks." Hospitals 56 (16 January 1980): 40-42.
- Korsak, Andrew. "Risk Management: A New Concept Calls for Definitional Refinement in Use of Terms." Hospitals 52 (16 November 1978): 48, 50.
- Korsak, Andrew. "Risk Management: Idea and Effort Widely Supported, but Appropriate Methods Debated." Hospitals 53 (1 April 1979): 175-80.
- Lanham, G. B. "Full Coverage of Issues Reflects Importance of Risk Management." Hospitals 55 (1 April 1981): 165-68.
- Latessa, Philip; Long, Glenda; and McCracken, Scott. "Risk Management: Incident Data Compiled and Compared." Hospitals 53 (16 November 1979): 54, 56, 58.
- McCollum, W. Ernie. "Hospital System Works to Ensure Risk Management Quality of Care." Hospitals 52 (1 October 1978): 86-88.

- McNulty, Elizabeth G. "Direct Patient Settlements Best for All Parties." Hospitals 54 (1 May 1980): 129-31.
- Meyer, Norman H., and Wendorf, Barbara H. "Analysis of Incident Reports and Malpractice Claims from a Group of Health Care Institutions." Quality Review Bulletin 5 (April 1979): 29.
- Meyer, Norman H., and Wendorf, Barbara H. "Risk Control: From Management of Crises to Prevention of Incidents." Quality Review Bulletin 5 (April 1979): 27-28, 30.
- Miller, L. A. "Risk Management: Preventive Medicine for Hospitals." Internist 21 (May 1980): 17-18.
- Monagle, John F. "Risk Management Is Linked with Quality of Care." Hospitals 54 (1 September 1980): 57-59.
- Newman, Garth M. "Basic Elements of a Loss Control Program." Hospital Progress 55 (November 1974): 46-49, 70.
- O'Connell, John A. "Risk Management for Hospitals." Hospital Progress 55 (November 1974): 40-42.
- Oppman, Charles D. "Staff Training Vital for Risk Management." Hospitals 53 (16 December 1979): 95-96, 98.
- Orlikoff, James E. "Integrated Approach Improves Quality Assurance, Risk Management Activities." Hospitals 54 (1 September 1980): 59-61.
- Oulton, Richard. "Reducing Risk through Compliance with Accreditation Standards." Quality Review Bulletin 6 (May 1980): 3-4.
- Oulton, Richard. "Use of Incidence Report Data in a System-wide Quality Assurance/Risk Management Program." Quality Review Bulletin 7 (June 1981): 2-7.
- Parente, Anthony. "Loss Prevention: A Systems Approach." Michigan Hospitals 18 (September 1982): 12-13.
- Philip, Cynthia O., and Faust, Richard. "Study of Malpractice Panels Notes Advantages, Problems, Gaps in Data." Hospitals 52 (1 October 1978): 84-85.
- Posner, James R. "The Financial Manager's Guide to Risk Management." Hospital Financial Management 12 (April 1982): 64-70.
- Punch, Linda. "Managers Target Broad Quality Assurance Goal." Modern Healthcare 12 (September 1982): 88-89.

- "Risk Management Held 'Preventive' Medicine." U.S. Medicine 14 (1 December 1978): 6.
- Roberts, Donald. "Early Physician Intervention Saves Hospital's Resources." Hospital Risk Management 2 (May 1980): 57-59.
- Roland, Neil. "Couple Gets Record \$12 Million in Army Medical Malpractice Suit." Army Times 43 (28 March 1983): 4, 341.
- Rozovsky, L. E. "Protecting the Hospital with Risk Management." Trustee 4 (July-August 1980): 9-10.
- Salman, Steven L. "A Systems Approach Can Ensure High-Quality Care and Low Costs." Hospitals 53 (16 March 1979): 79-82.
- Salman, Steven L. "Committee Is an Important Tool in Risk Management." Hospitals 54 (16 September 1980): 45, 48, 50.
- Salman, Steven L. "The Impact of Comparative Negligence on Malpractice." Hospitals 55 (16 March 1981): 46-49.
- Sax, Arline B. "AHA Seminars Encourage Risk Management Programs." Hospitals 52 (16 April 1978): 38-39.
- Sax, Arline B. "Patient Relations in Risk Management." Quality Review Bulletin 5 (April 1979): 14-15.
- Sax, Arline B. "Physicians and Hospital Managers: Partners in Risk Management." Hospitals 53 (16 January 1979): 41, 44, 46, 134.
- Severson, Layton C. "Hospital Risk Management." Hospital Administration Currents 23 (September-October 1979): 19-22.
- Smith, N. G. "A Systemwide Quality Assurance/Risk Management Program." Hospital Medical Staff 8 (August 1979): 40-44.
- Smith, Paul. "DOD Orders Standards for Physicians." Army Times 32 (21 March 1983): 3.
- Stearns, Gary, and Fox, Leslie Ann. "A Three-Phase Plan for Integrating Quality Assurance Activities." Quality Review Bulletin 6 (January 1980): 13-16.
- Stearns, Gary, and Fox, Leslie Ann. "Assessing Quality Assurance and Risk Management Activities: A Profile Analysis." Quality Review Bulletin 5 (October 1979): 26-29.
- Stewart, Kenneth P. "Risk Management: No Task for the Timid." Trustee 32 (April 1979): 10-12, 16.

- Stewart, Kenneth P. "The Physician's Stake in Risk Management." Hospital Medical Staff 6 (September 1977): 30-34.
- Swartzbeck, Edna M., and Milligan, W. Lloyd. "A Comparative Study of Hospital Incidents." Nursing Management 13 (January 1982): 39-43.
- Tabatabai, Cheryl. "Interview with Dr. Stanley A. Skillicorn." Quality Review Bulletin 7 (April 1981): 20-23.
- Traska, Maria R. "Program Spots Risk Areas and Trends." Modern Healthcare 8 (December 1978): 48.
- "Trustee Development Program: The Board's Role in Risk Management." Trustee 32 (September 1979): 55-62.
- Van Sluyter, Charles K. "Organizing for Patient Safety and Liability Control." Quality Review Bulletin 5 (April 1979): 21-24.
- Walters, Timothy G. "Fielding Risk Responsibilities in the Hospital." Health Services Manager 12 (September 1979): 1-2.
- White, Jane S. "Is This the Ultimate Step in Quality Control?" Medical Economics 60 (7 February 1983): 204-6, 210, 212, 214-15.
- Wright, Richard E., and Gaudiosi, Thomas S. "Risk Management: A Management-Oriented Program Implemented through the Medical Director's Office." Quality Review Bulletin 7 (July 1981): 10-12.
- Yanish, Donna Leigh. "Aggressive Incident Reporting Saves Hospitals Millions of Dollars." Modern Healthcare 9 (December 1979): 64.

Unpublished Material

- DeCleene, Robert O., Marketing Coordinator, Marsh & McLennan, Inc., Honolulu, Hawaii. Interview, March 14, 1983.
- Machado, Donald C., Chief, Litigation Division, Claims Service, U.S. Army Western Command, Fort Shafter, Hawaii. Interview, February 17, 1983.
- Manning, Jay, Major, Medical Claims Officer, Office of the Staff Judge Advocate, Headquarters, Health Services Command, Fort Sam Houston, Texas. Interview, March 7, 1983.
- Marsh & McLennan, Inc. Incident Report Tracking (IRTS) System. A fact sheet. San Francisco, Calif.: By author, n.d.

Marsh & McLennan, Inc. Medical Management Analysis (MMA). A fact sheet. San Francisco: By author, n.d.

Savoie, Philip, Captain, Legal Officer, Office of the Staff Judge Advocate, Headquarters, Health Services Command, Fort Sam Houston, Texas. Interview, March 8, 1983.